

WHAT IS CLAIMED IS:

1. An arylamine compound of the formula:



wherein,

5 Ar independently each occurrence is a group comprising one or more divalent aromatic groups, and optionally two Ar groups separated by a single NX group may be joined together by a second covalent bond or by a bridging group, thereby forming a fused multiple ring system;

X is an inert substituent or a cross-linkable group, with the proviso that in at least one occurrence in said compound, X is a crosslinkable group;

10 Z independently each occurrence is hydrogen or a leaving group,

n is 1 or 2; and

n' is 0, 1 or 2.

2. A compound according to claim 1 wherein X in at least one occurrence is a moiety containing a double bond, a triple bond, a precursor capable of in situ formation of a double bond, or a heterocyclic, addition polymerizable group.

3. A compound according to claim 1 wherein X in at least one occurrence is selected from the group consisting of benzocyclobutanyl groups and substituted C₆₋₁₂ arylene groups containing one or more substituents selected from the group consisting of benzocyclobutane, azide, oxirane, di(hydrocarbyl)amino, cyanate ester, hydroxy, glycidyl ether, C₁₋₄ alkylacrylate, C₁₋₄ alkylmethacrylate, ethenyl, ethenyloxy, perfluoroethenyloxy, ethynyl, maleimide, nadimide, tri(C₁₋₄)-alkylsiloxy, tri(C₁₋₄)alkylsilyl, and halogenated derivatives thereof.

25 4. A compound according to claim 1 wherein X in at least one occurrence is 1-benzo-3,4-cyclobutane or 4-phenyl-1-(benzo-3,4-cyclobutane).

5. A compound according to claim 1 wherein Z each occurrence is halo, cyano, triflate, azide, -B(OR¹)₂, or $\begin{array}{c} O \\ | \\ -B-O-R^2 \\ | \\ O \end{array}$.

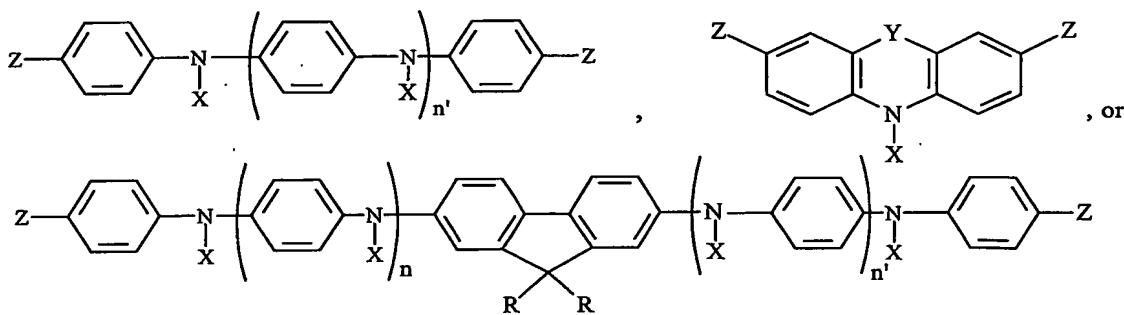
30 wherein R¹, independently in each occurrence, is hydrogen or a C₁₋₁₀ alkyl group, and R², independently each occurrence, is a C₂₋₁₀ alkylene group.

6. A compound according to claim 1 wherein Ar each occurrence is phenylene, 9,9-di(C₁₋₂₀alkyl)fluorenyl, or a combination thereof; X is 3,4-benzocyclobutan-1-yl, ethenyl or p-ethenylphenyl; Z is bromine or hydrogen; n is 1 or 2; and n' is 0 or 1.

5 7. A compound according to claim 6 wherein Ar each occurrence is phenylene; each X group is 3,4-benzocyclobutan-1-yl; Z each occurrence is bromine; n is 1 or 2; and n' is 0.

8. A compound according to claim 7 wherein n is 1.

10 9. A compound according to claim 1 having the formula:



wherein Y is a covalent bond, O, S or NR; where

R independently each occurrence is i) hydrogen; ii) halogen; iii) a C₁₋₂₀ hydrocarbyl group; iv) a hydrocarbyl group substituted with one or more heteroatom containing groups containing up to 20 atoms not counting hydrogen and wherein the heteroatom is selected from S, N, O, P, B or Si; v) a halogenated derivative of iii) or iv); or vi) a substituted derivative of iii) or iv) wherein the substituent is a crosslinkable X group; and

n, n', X, and Z are as previously defined in claim 1.

20 10. An oligomer or polymer having one or more repeating groups of the formula:



where X' is X or a divalent crosslinked remnant formed by addition polymerization of a crosslinkable X group;

Z' is Z, a covalent bond, or a terminal group formed by replacement or reaction of a leaving group;

Ar independently each occurrence is a divalent aromatic group, and optionally two Ar groups separated by a single NX group may be joined together by a second covalent bond or by a bridging group, thereby forming a fused multiple ring system;

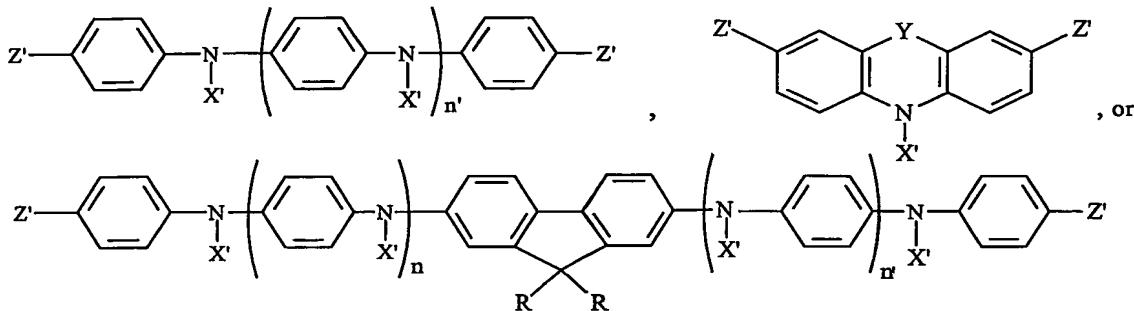
X is an inert substituent, with the proviso that in at least one occurrence in said compound, X is a crosslinkable group;

Z independently each occurrence is hydrogen or a leaving group,

n is 1 or 2; and

5 n' is 0, 1 or 2.

11. An oligomer or polymer according to claim 10 having one or more repeating groups Ia) of the formula:



10 where X' is X or a divalent crosslinked remnant formed by addition polymerization of a crosslinkable X group;

X is an inert substituent or a group capable of forming crosslinking functionality;

Y is O, S or NR';

15 R independently each occurrence is i) hydrogen; ii) halogen; iii) a C₁₋₂₀ hydrocarbyl group; iv) a hydrocarbyl group substituted with one or more heteroatom containing groups containing up to 20 atoms not counting hydrogen and wherein the heteroatom is selected from S, N, O, P, B or Si; v) a halogenated derivative of iii) or iv); or vi) a substituted derivative of iii) or iv) wherein the substituent is a crosslinkable X group;

20 Z' is Z, a covalent bond or a terminal group formed by replacement or reaction of a leaving group;

n is 1 or 2; and

n' is 0, 1 or 2.

12. A crosslinked polymer according to claim 10 or 11 wherein X' in at least one occurrence is a divalent crosslinked remnant formed by addition polymerization of a crosslinkable X group.

13. A crosslinked polymer according to claim 12, wherein X' comprises conjugated unsaturation.

14. A process for preparing oligomers or polymers according to claim 10, which 5 comprises heating a composition comprising a compound according to claim 1 under reaction conditions sufficient to form an oligomer or polymer.

15. A film comprising one or more of the oligomers or polymers according to claim 10 or preparable according to claim 14.

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16. An electronic device comprising one or more layers of polymer films, at least one of which comprises a film according to claim 15.